



System And Method For Selecting A
Receiver Hardware Configuration To Detect
Emitter Signals
GOUNALIS, Anthony J.
Serial No.: 10/675,644
Docket No.: L0562.70037US00

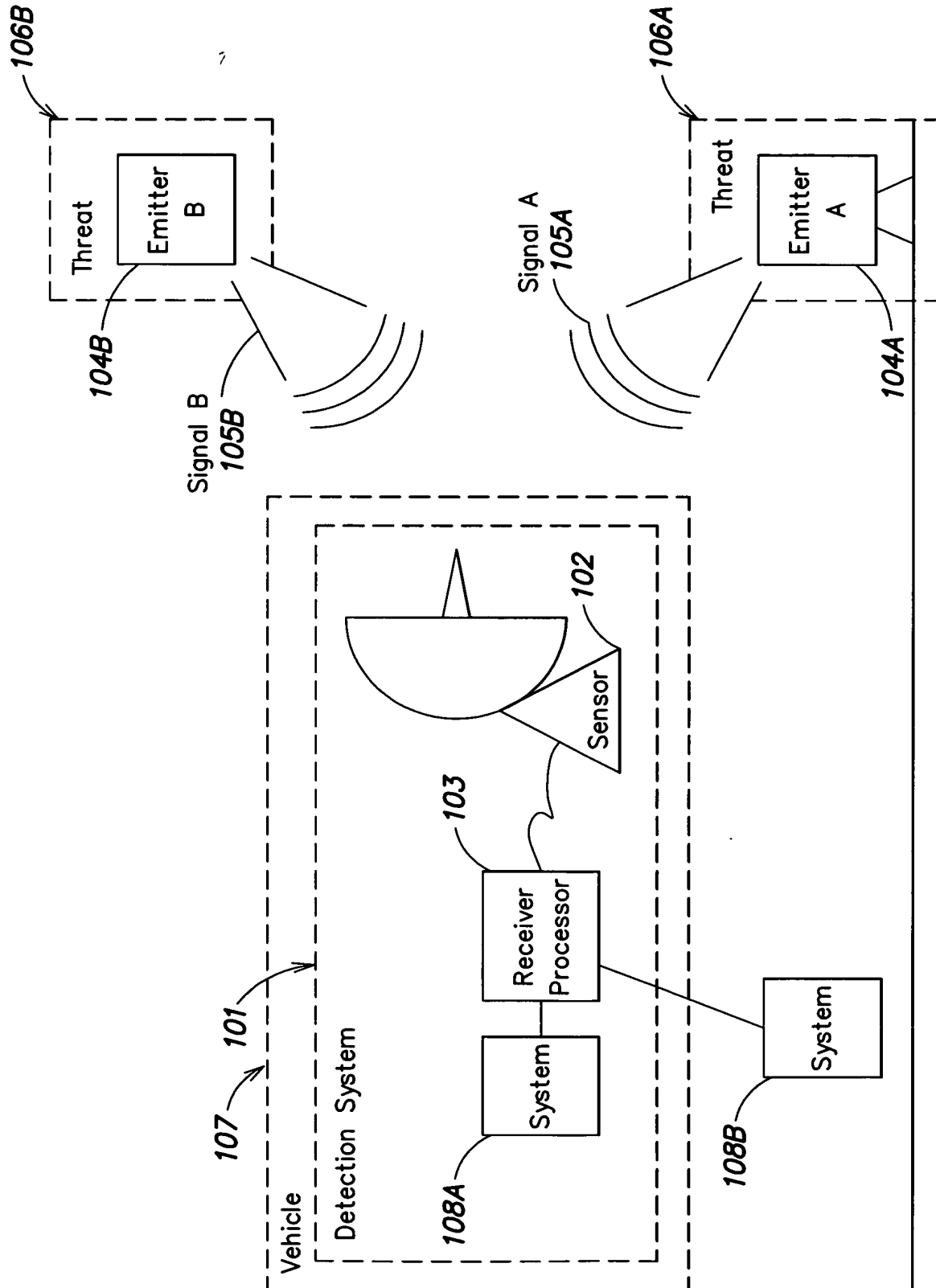


FIG. 1

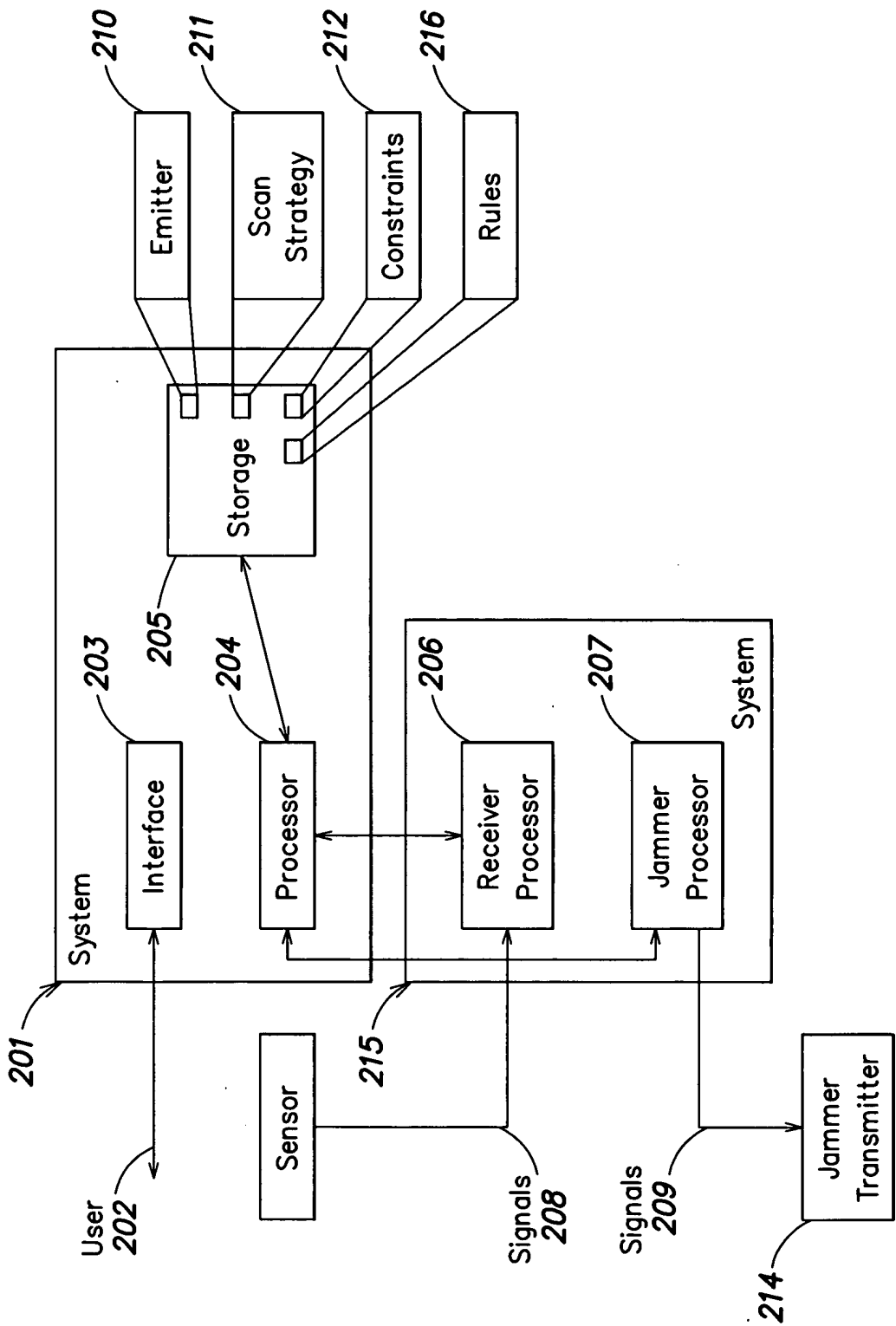


FIG. 2

Process
300 →

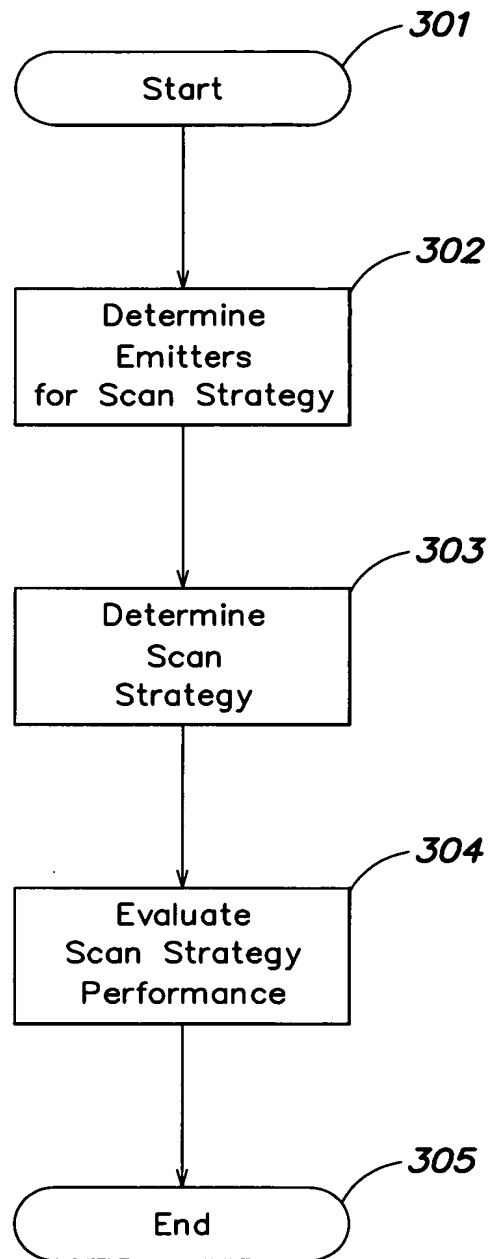


FIG. 3

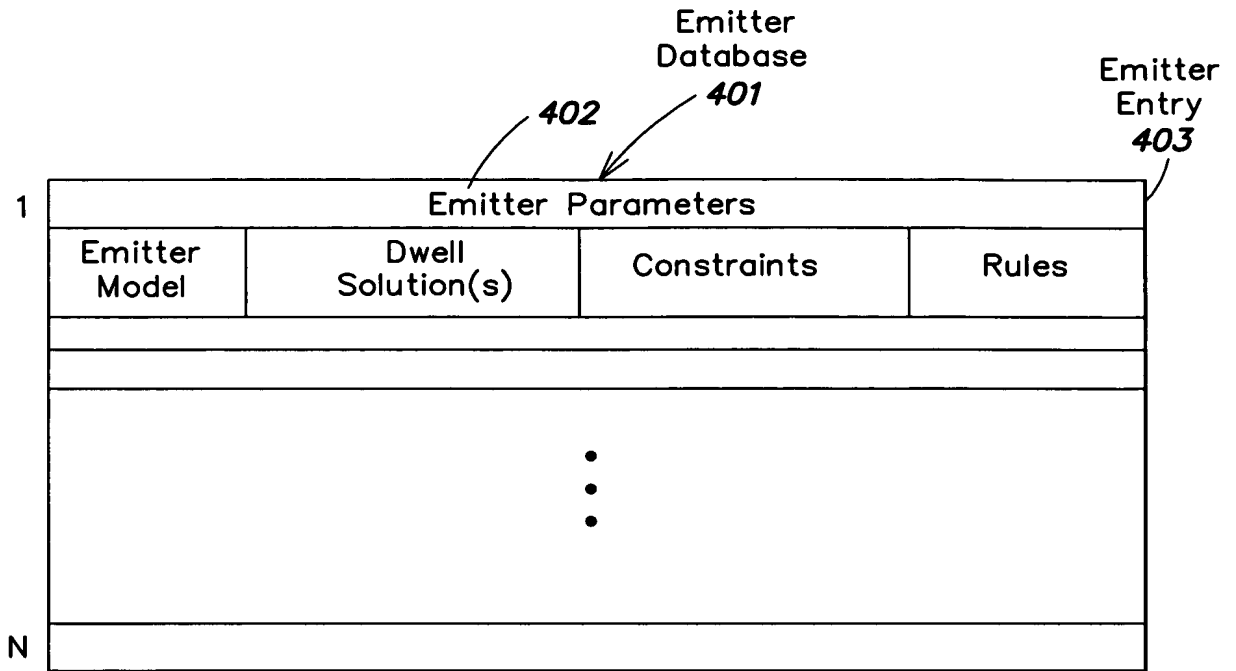


FIG. 4

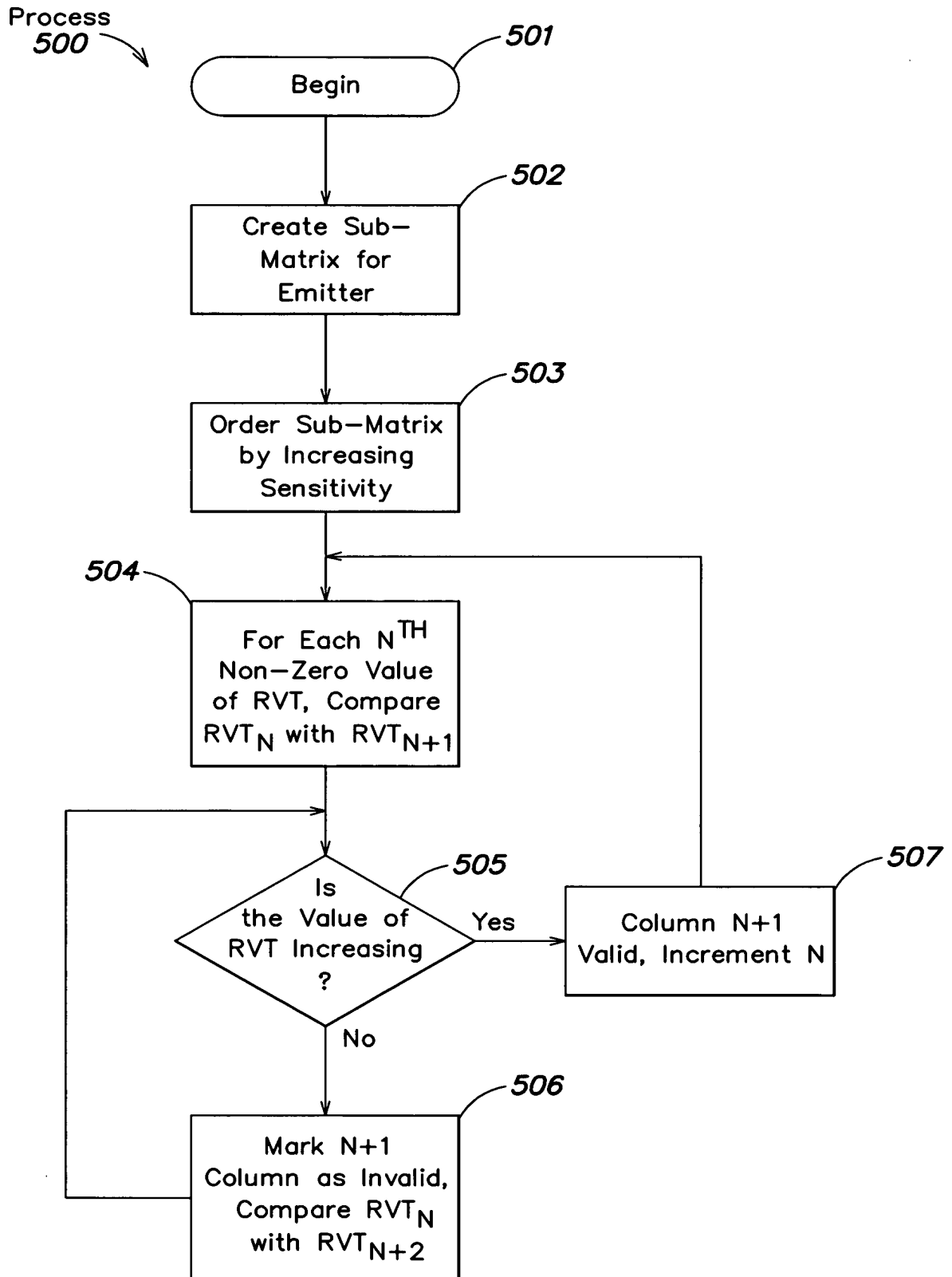


FIG. 5

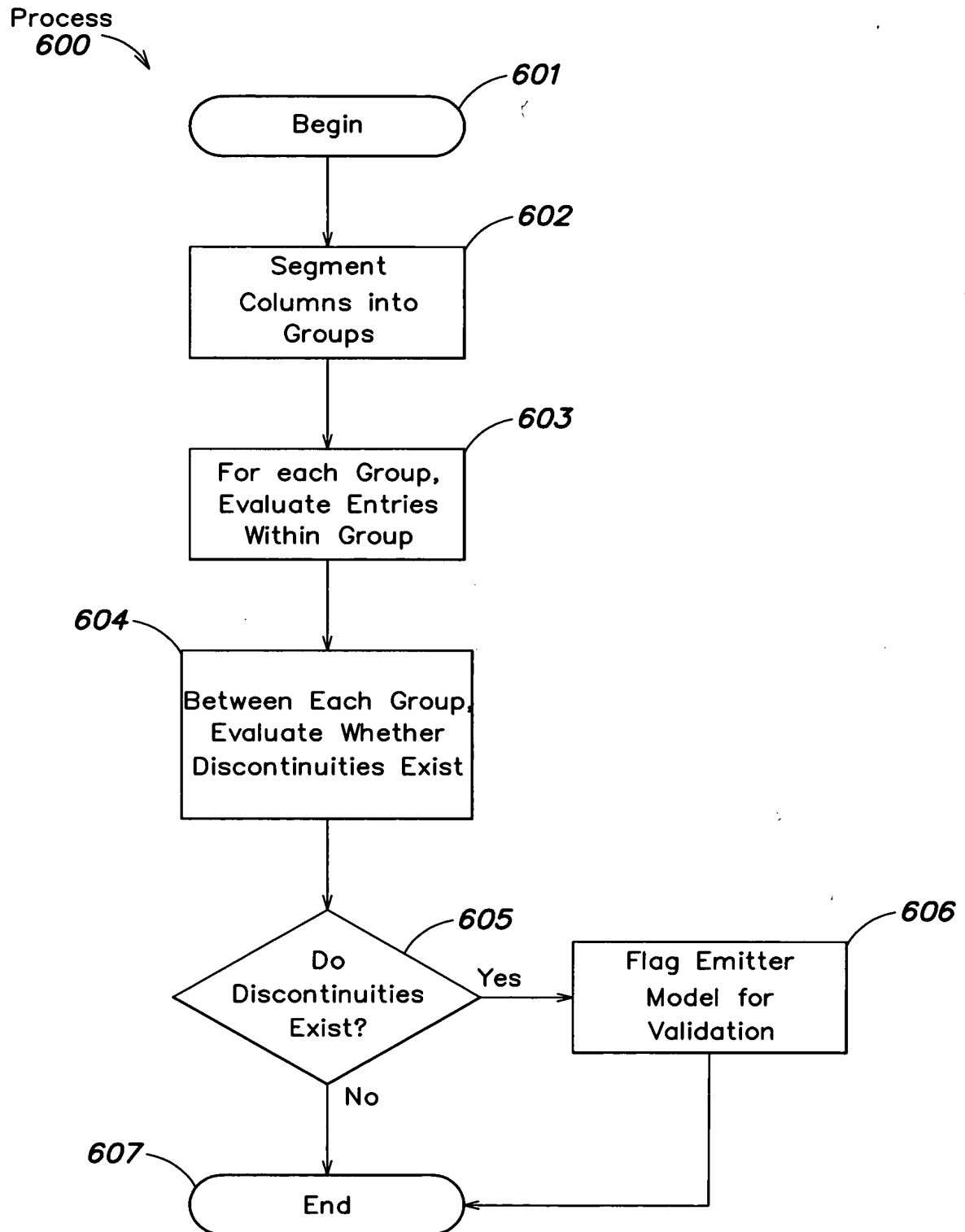


FIG. 6

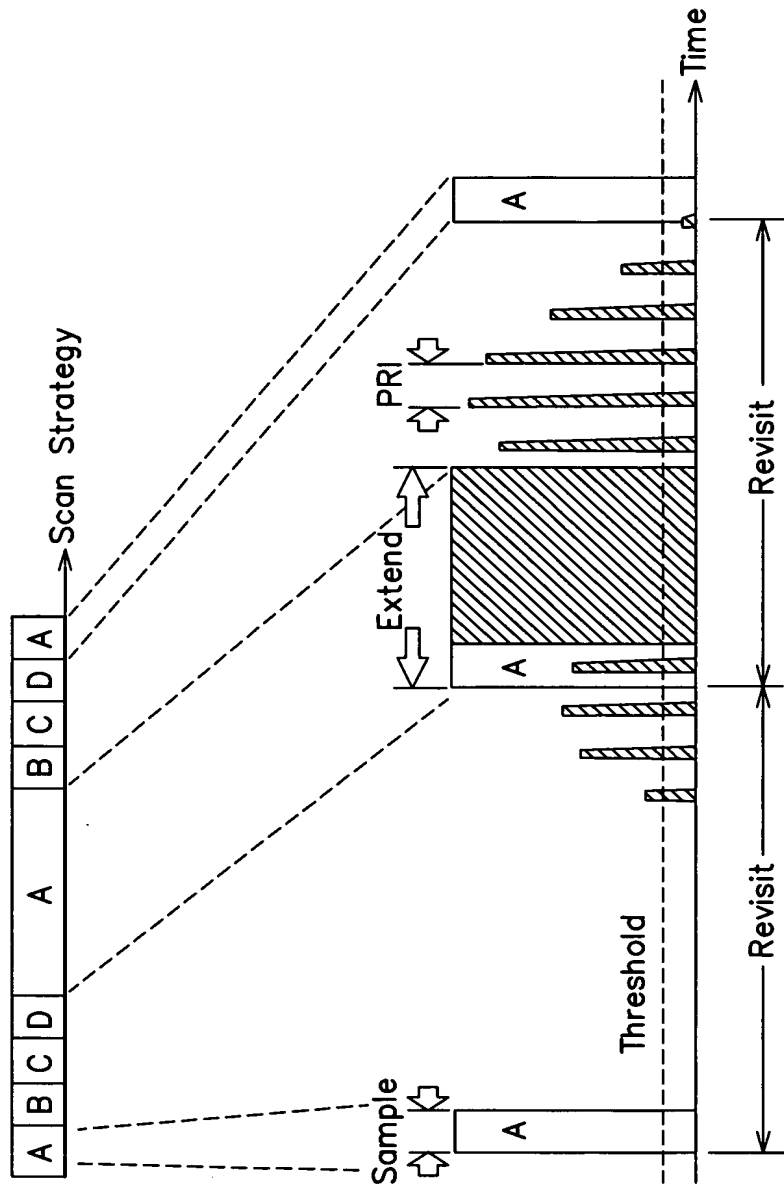
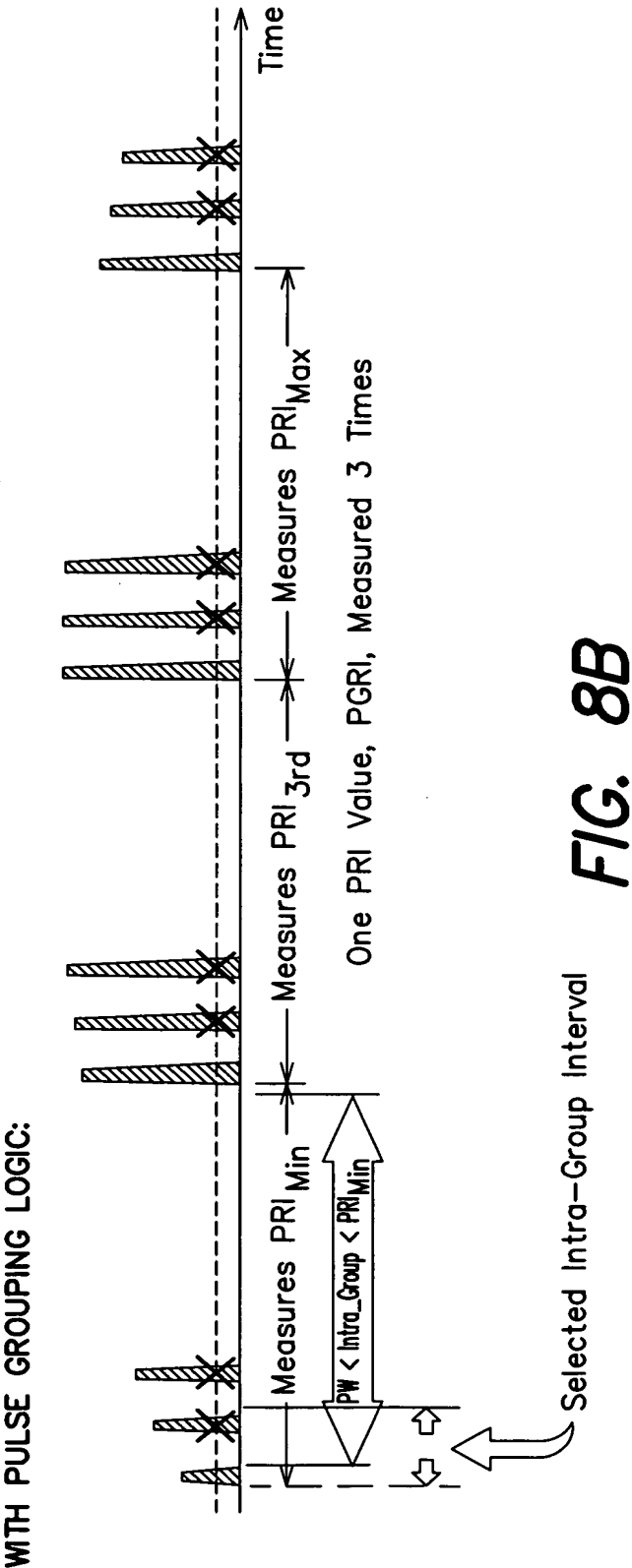
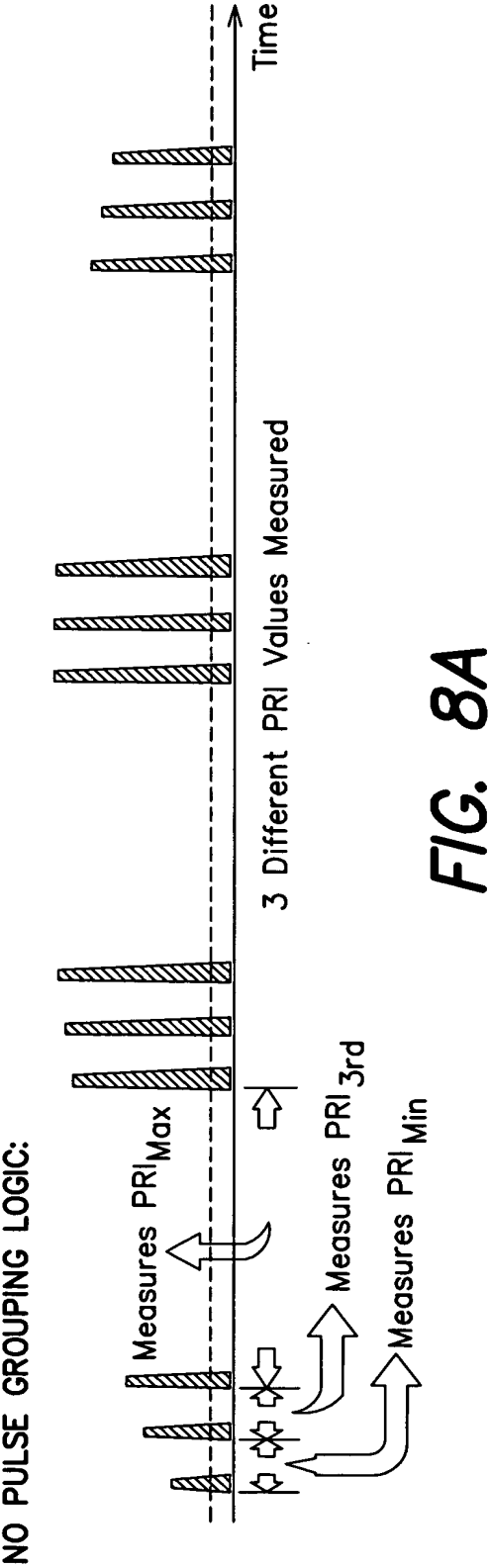


FIG. 7



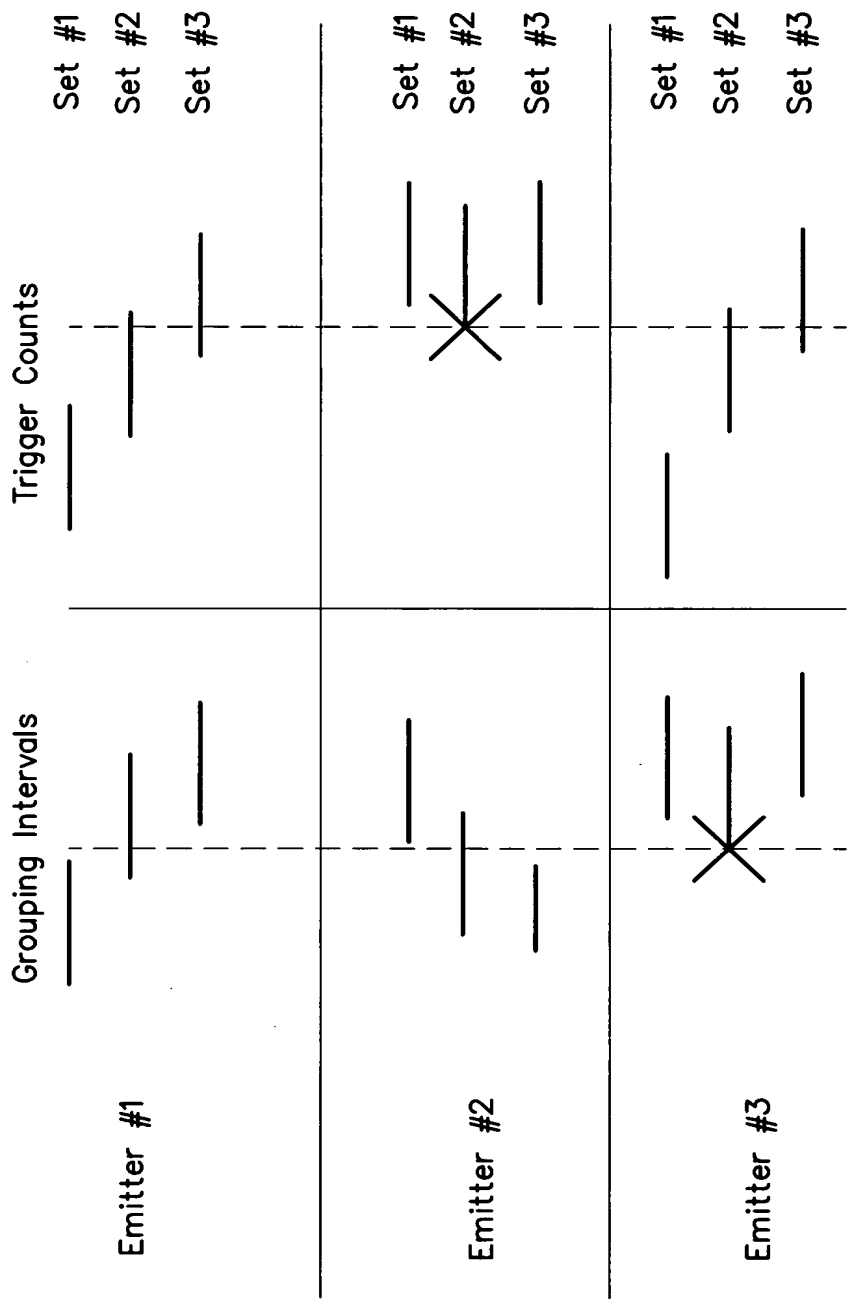


FIG. 9

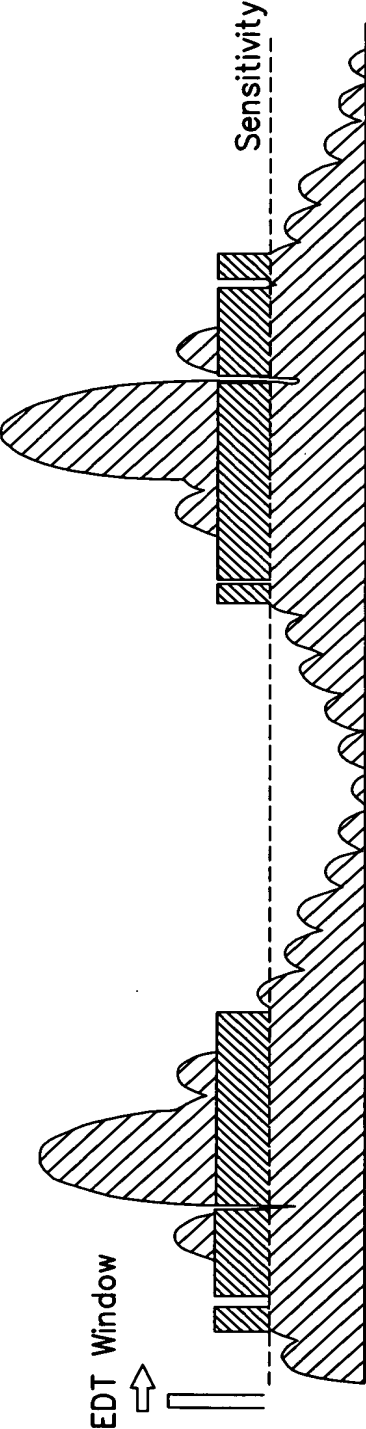


FIG. 10A

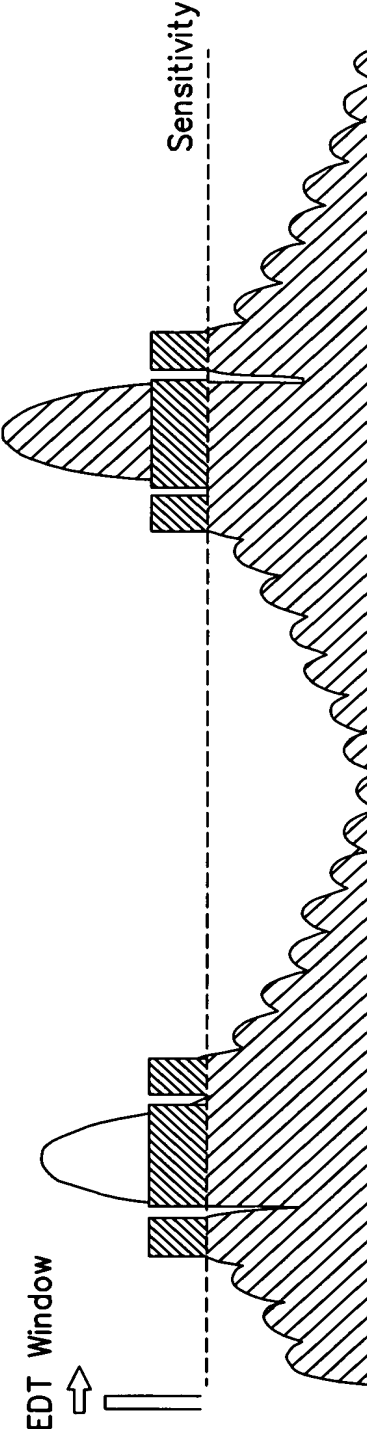


FIG. 10B

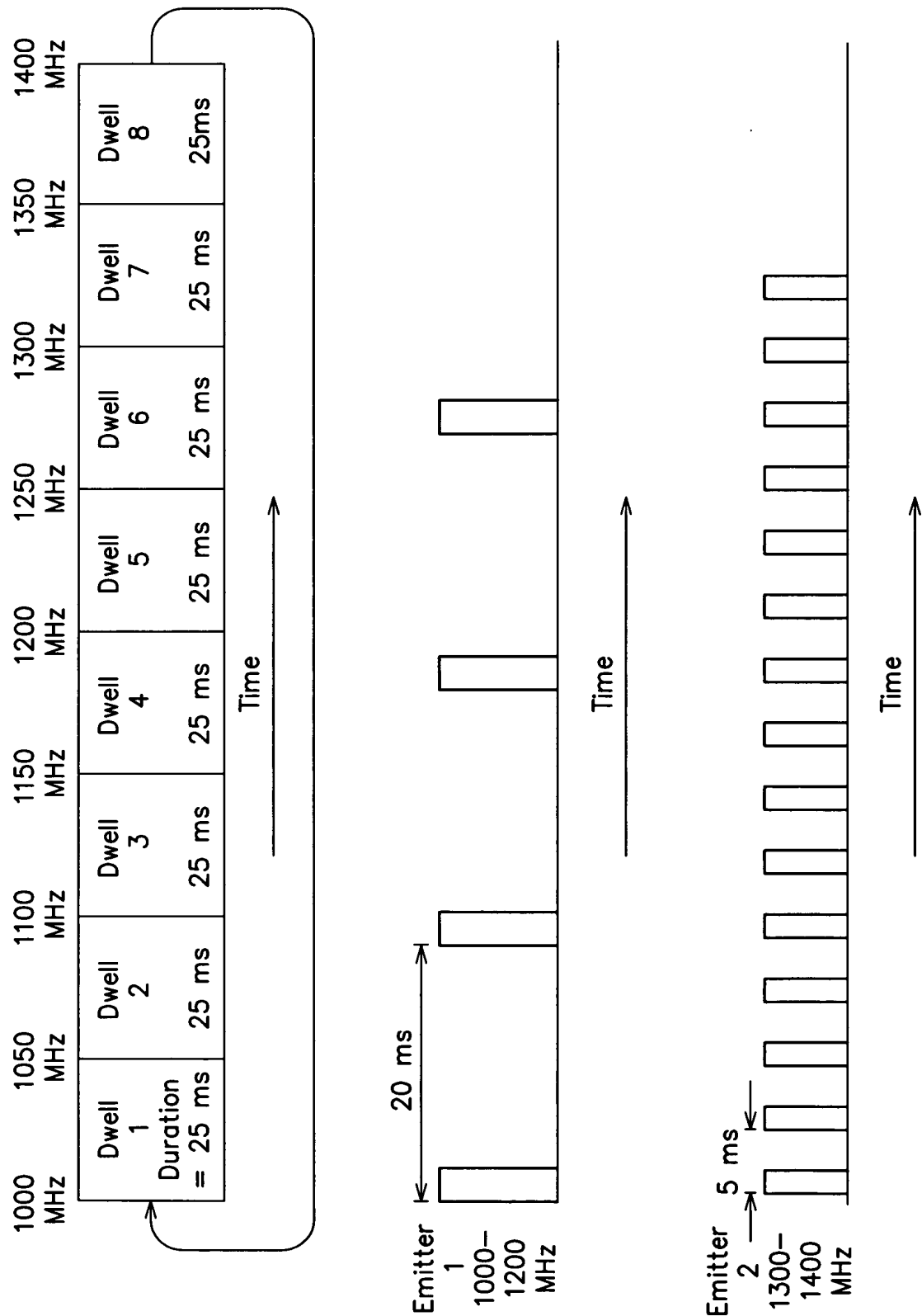


FIG. 11

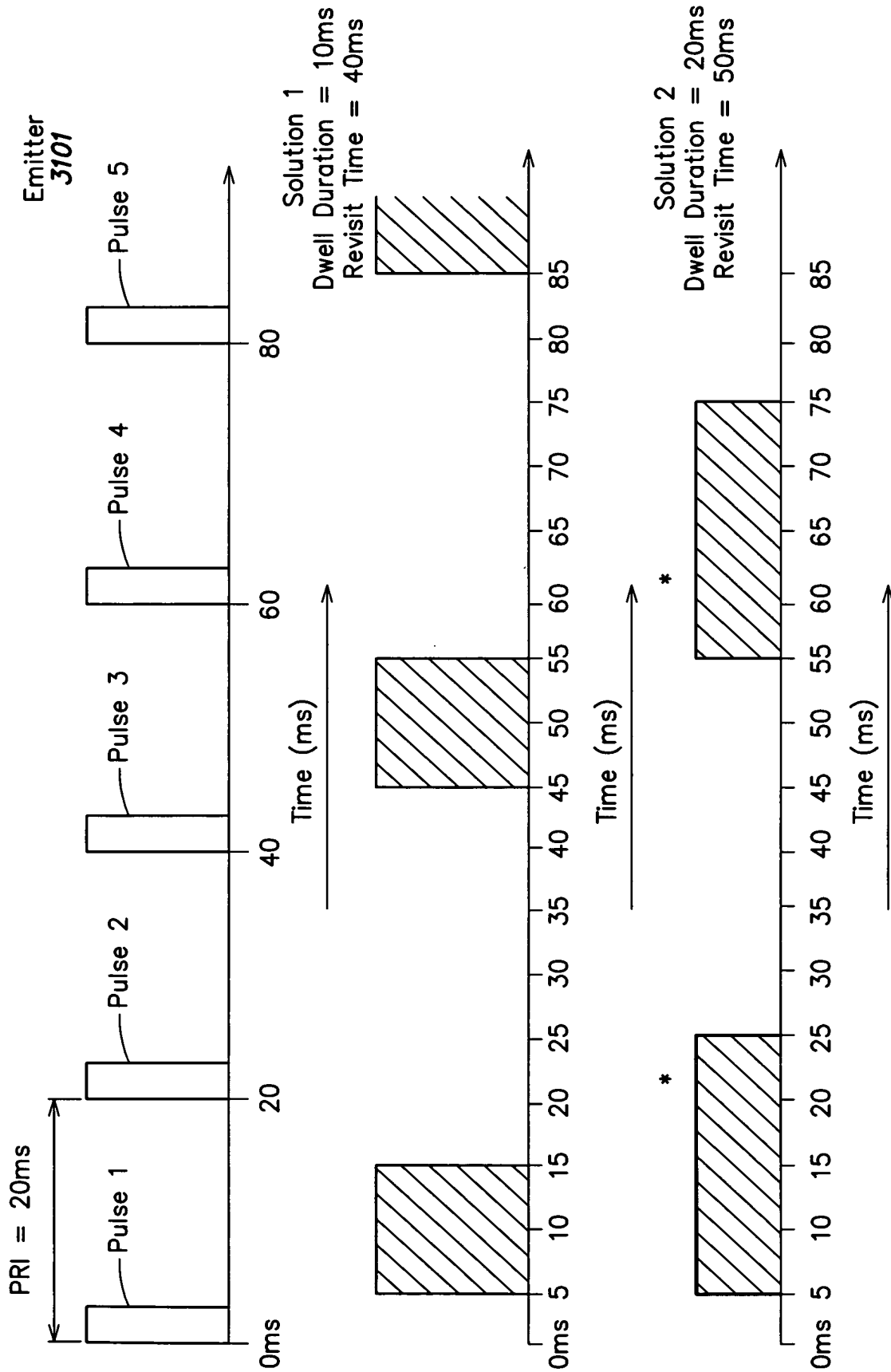


FIG. 12

4000

Emitter Name	Detecting Method 1 250MHz IF/ 15MHz VBW RVT	Detecting Method 2 30MHz IF/ 15MHz VBW RVT	RF Min (MHz)	RF Max (MHz)	Min MDT (ms)
E1	100 ms	650 ms	1000	1300	3
E2	120 ms	780 ms	1220	1350	5
E3	110 ms	330 ms	1510	1810	2
E4	130 ms	390 ms	1730	1860	4

FIG. 13

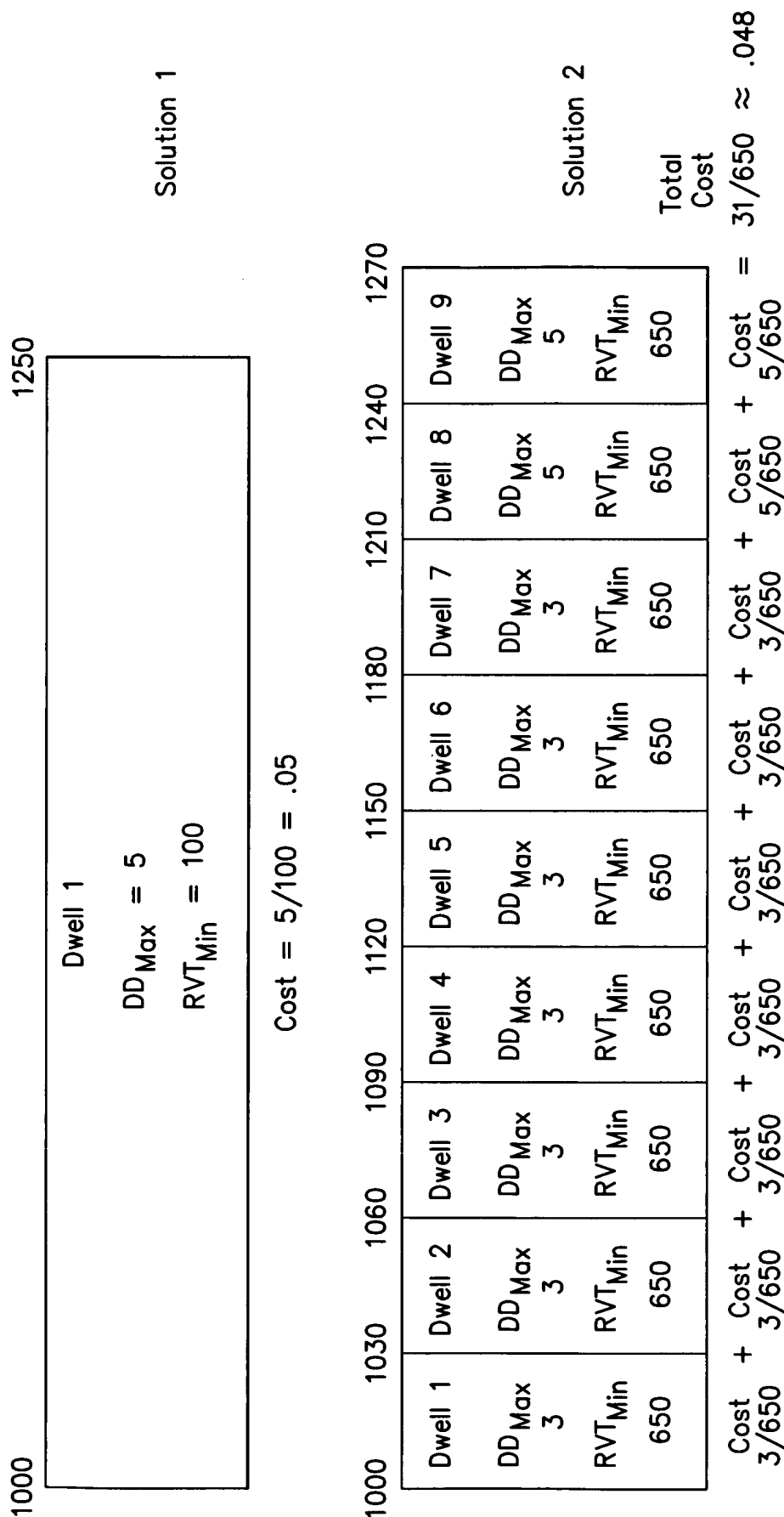


FIG. 14A

1510

1760

Dwell 1	
DD _{Max} = 4 ms	
RVT _{Min} = 330 ms	

Solution 1

$$\text{Cost} = 4/330 = .01\overline{2}$$

1510 1540 1570 1600 1630 1660 1690 1720 1750 1780

Dwell 1	Dwell 2	Dwell 3	Dwell 4	Dwell 5	Dwell 6	Dwell 7	Dwell 8	Dwell 9
DD _{Max} 2	DD _{Max} 2	DD _{Max} 2	DD _{Max} 2	DD _{Max} 2	DD _{Max} 2	DD _{Max} 2	DD _{Max} 4	DD _{Max} 4
RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms

Solution 2

$$\text{Cost} + \text{Cost} + \text{Cost} + \text{Cost} + \text{Cost} + \text{Cost} + \text{Cost} + \text{Cost} + \text{Cost} = 22/330 = .0\overline{6}$$
$$2/330 \quad 2/330 \quad 2/330 \quad 2/330 \quad 2/330 \quad 2/330 \quad 2/330 \quad 4/330 \quad 4/330$$

FIG. 14B

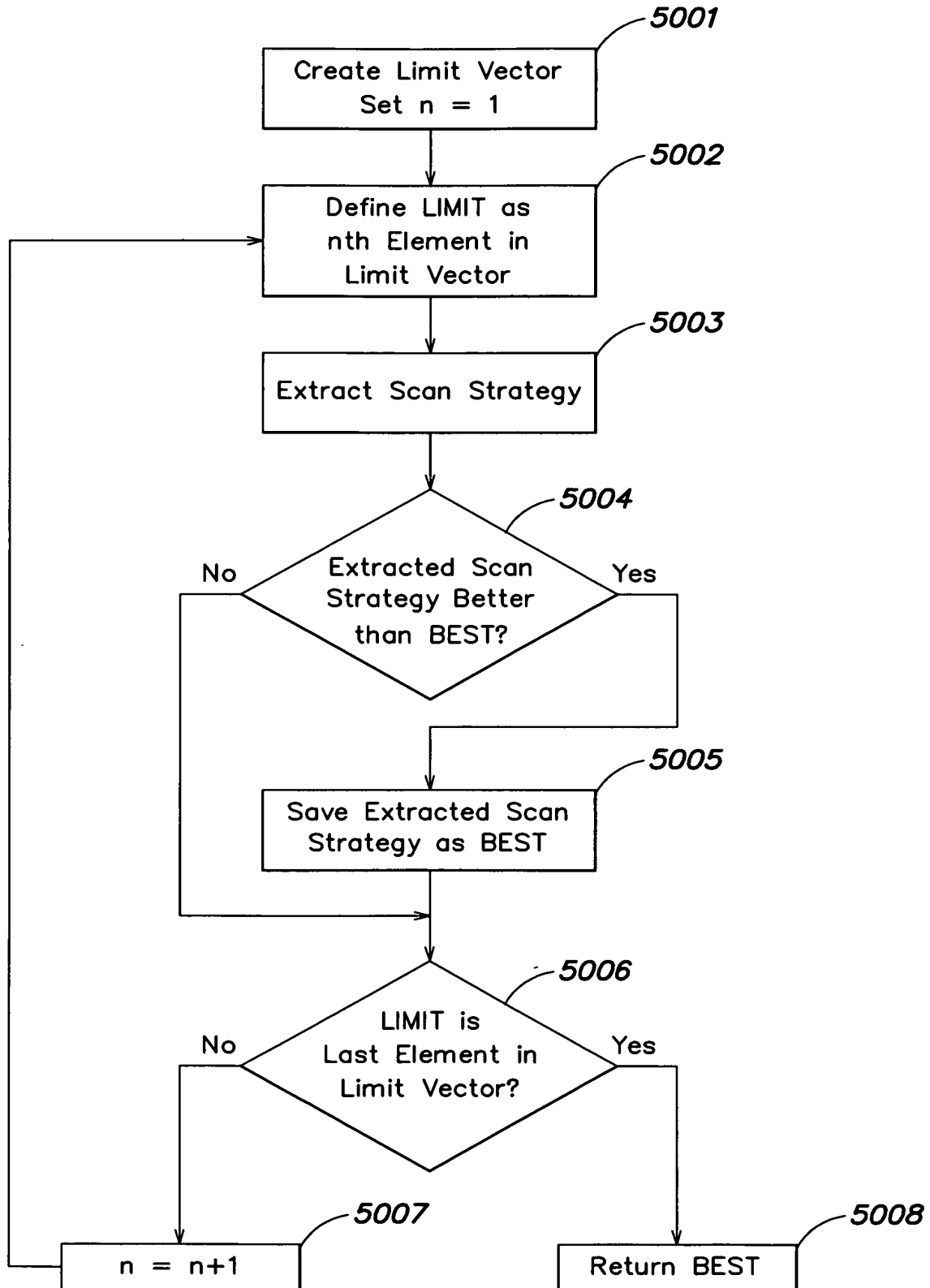


FIG. 15

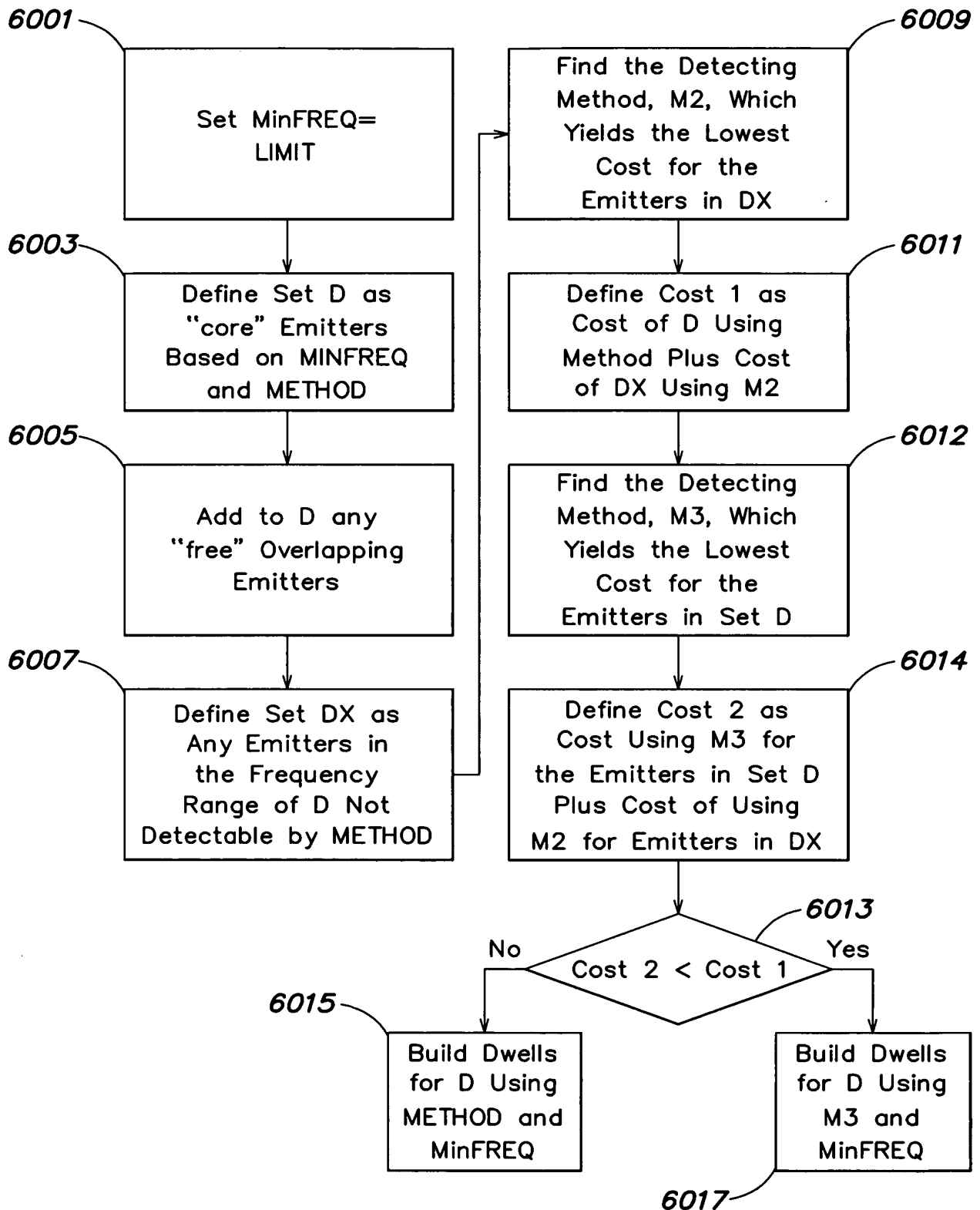


FIG. 16

Name	RF Min	RF Max
E1	1100	1200
E2	1150	1250

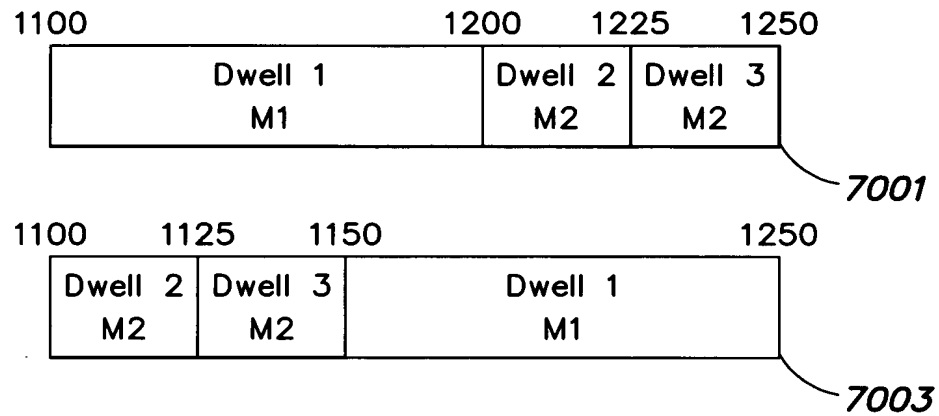


FIG. 17

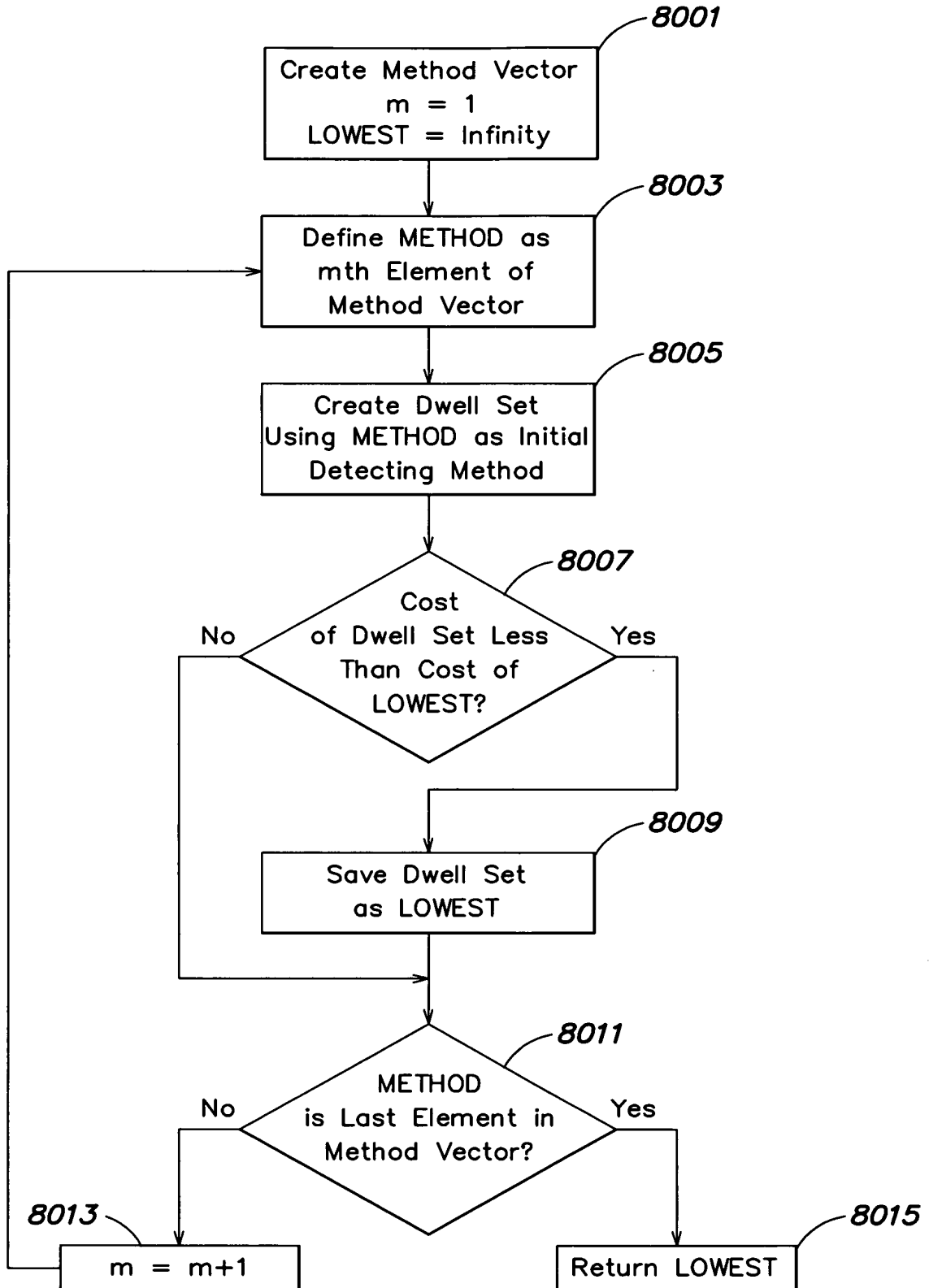


FIG. 18

Emitter	Dwell Duration (ms)	Revisit Time (ms)
Emitter 1	1	500
Emitter 2	2	1200

FIG. 19

Emitter	Dwell Duration (ms)	Revisit Time (ms)	Cost
Emitter 1	1	500	.002
Emitter 2	5	1000	.005

FIG. 20

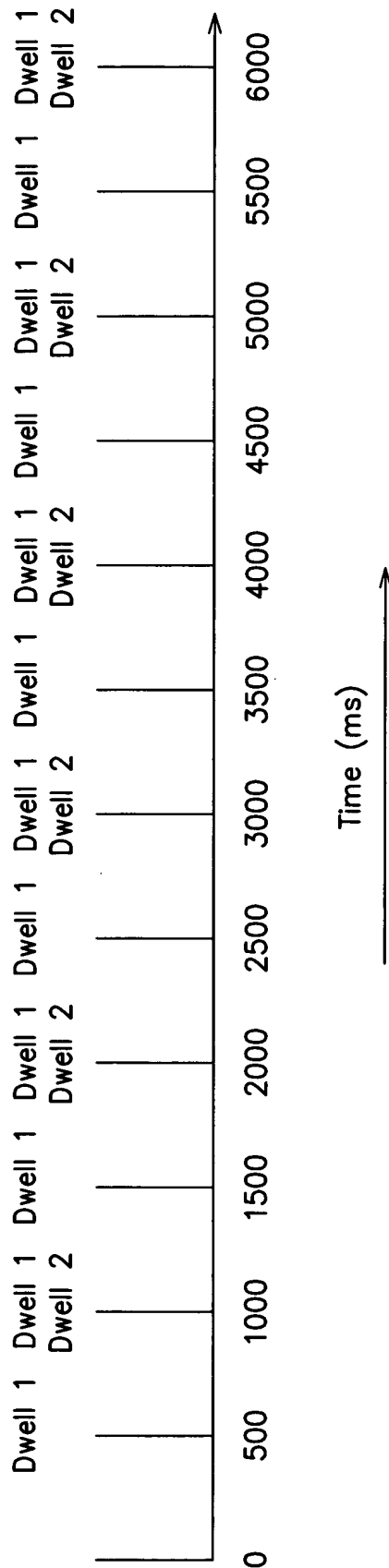


FIG. 21

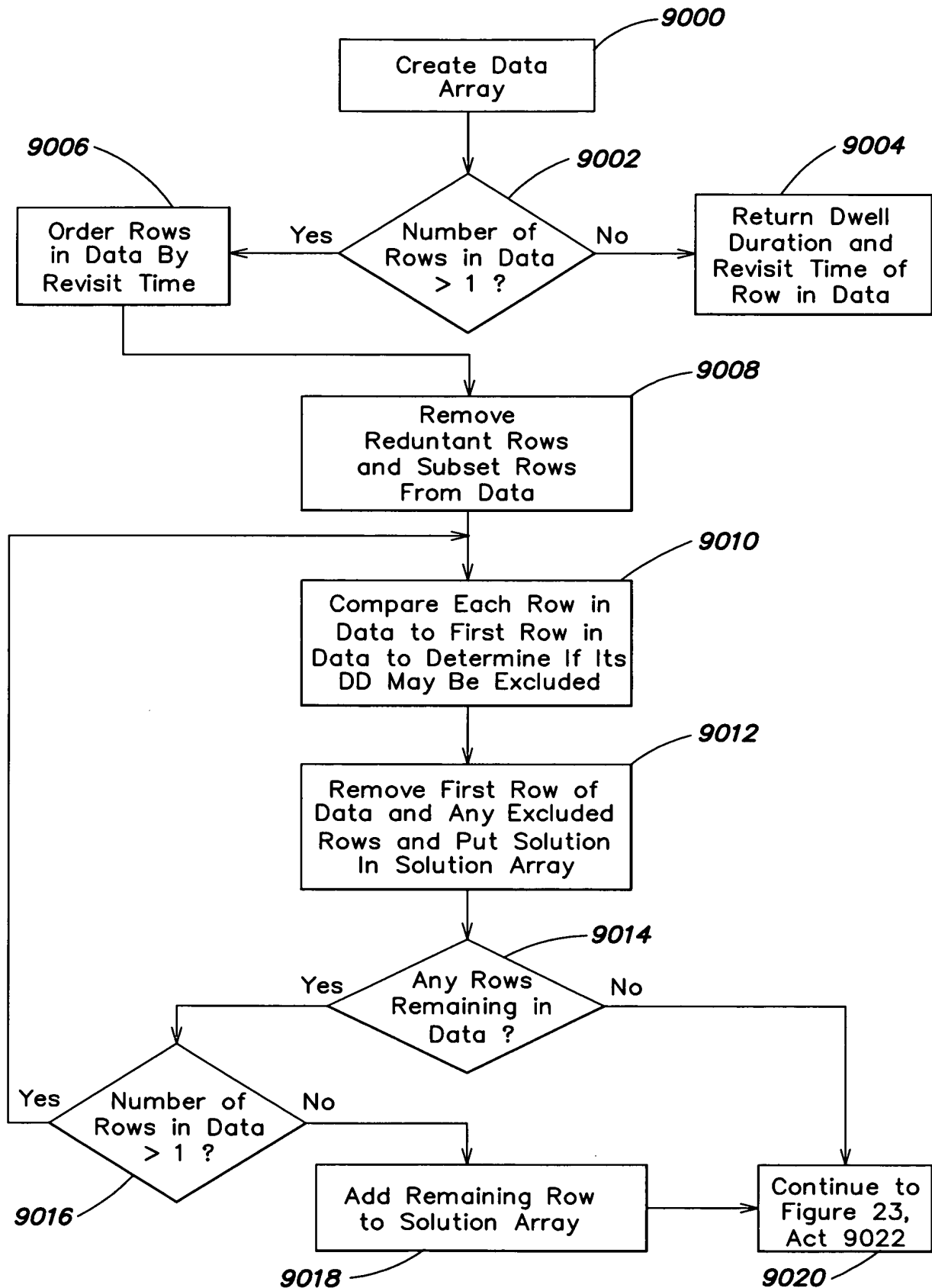


FIG. 22

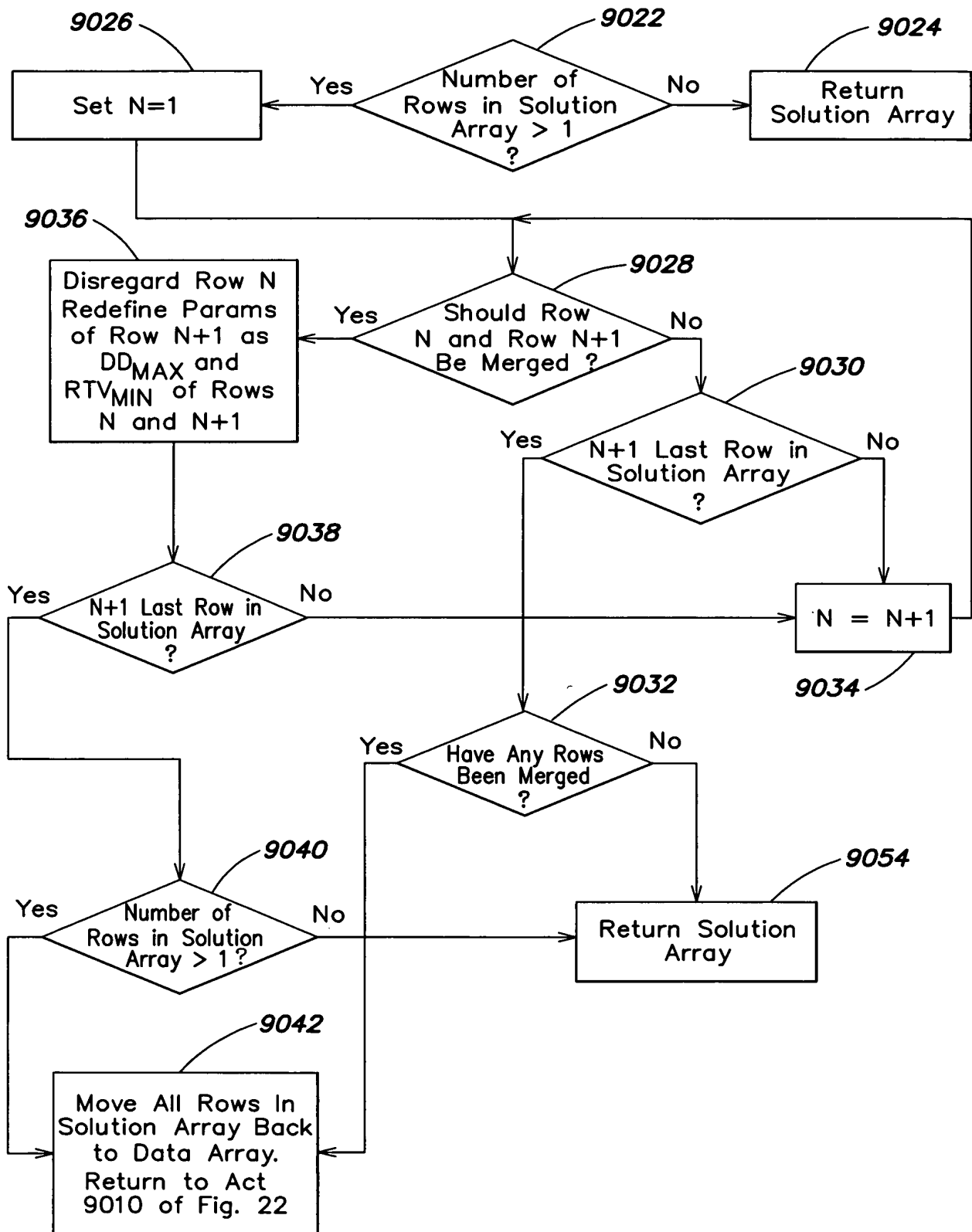


FIG. 23

9044

Data		
MDT	EDT	RVT
1	7	500
2	9	700
2.3	11	800
3	19	2000
3.05	17	2868

9051

9052

FIG. 24C

9044

Data		
MDT	EDT	RVT
1	7	500
2	9	700
2.3	11	800
0.5	3.5	1000
3	19	2000
3	19	2000
3.05	17	2868

9048

9049

9050

FIG. 24B

9044

Data		
MDT	EDT	RVT
3.05	17	2868
3	19	2000
3	19	2000
1	7	500
2	9	700
2.3	11	800
0.5	3.5	1000

FIG. 24A

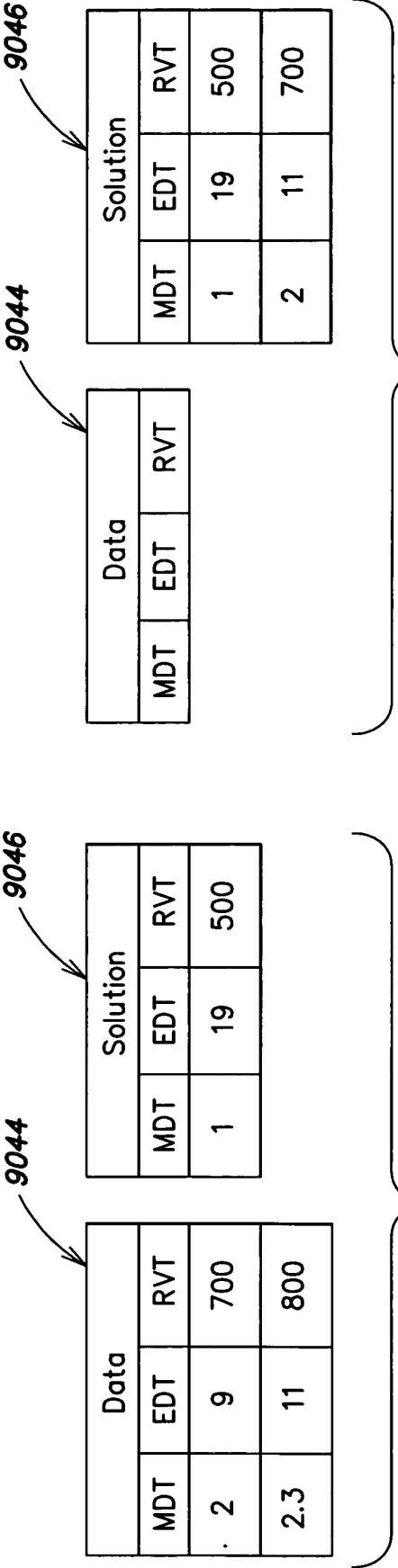


FIG. 24E

FIG. 24D

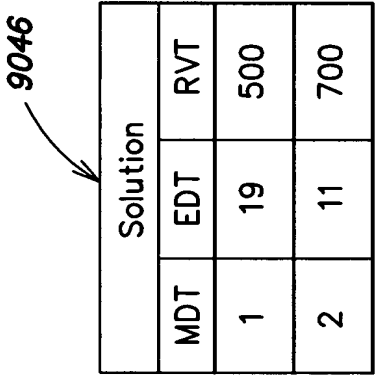


FIG. 24F

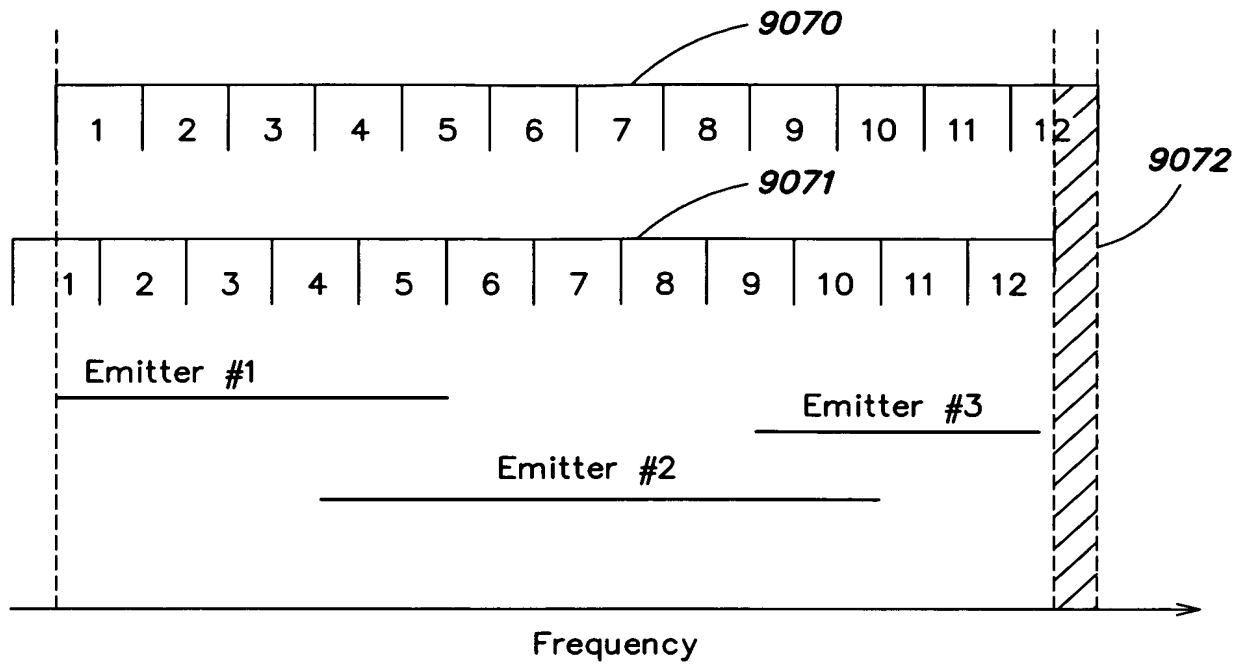


FIG. 25

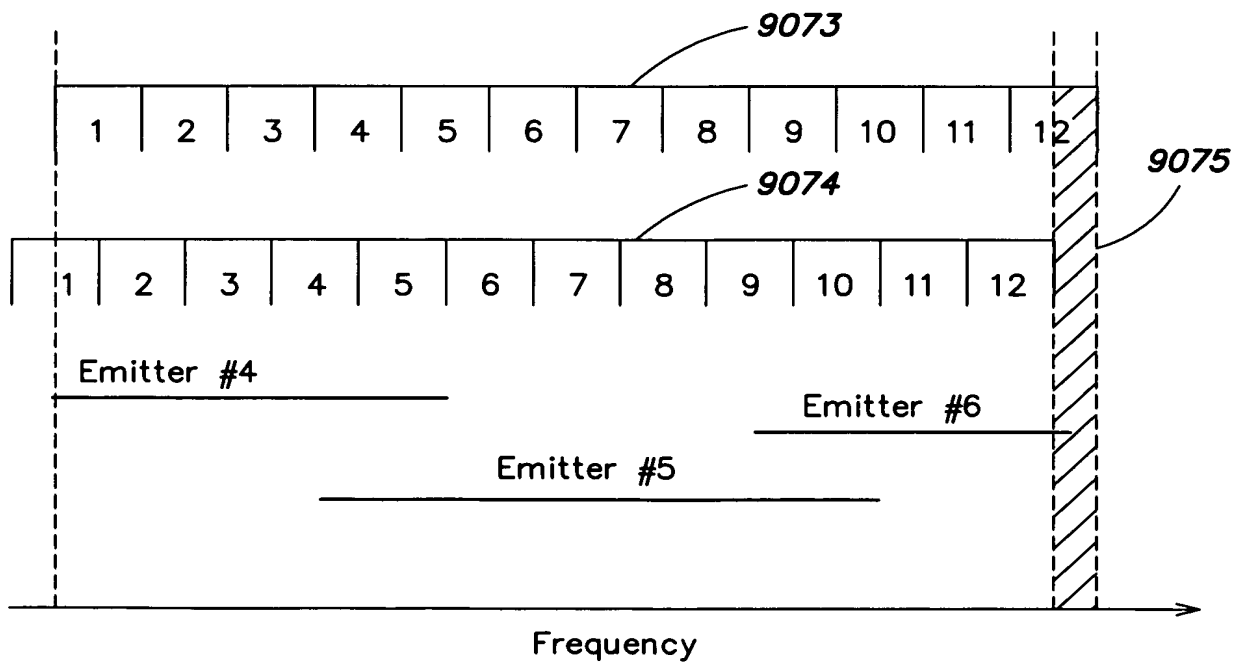


FIG. 26

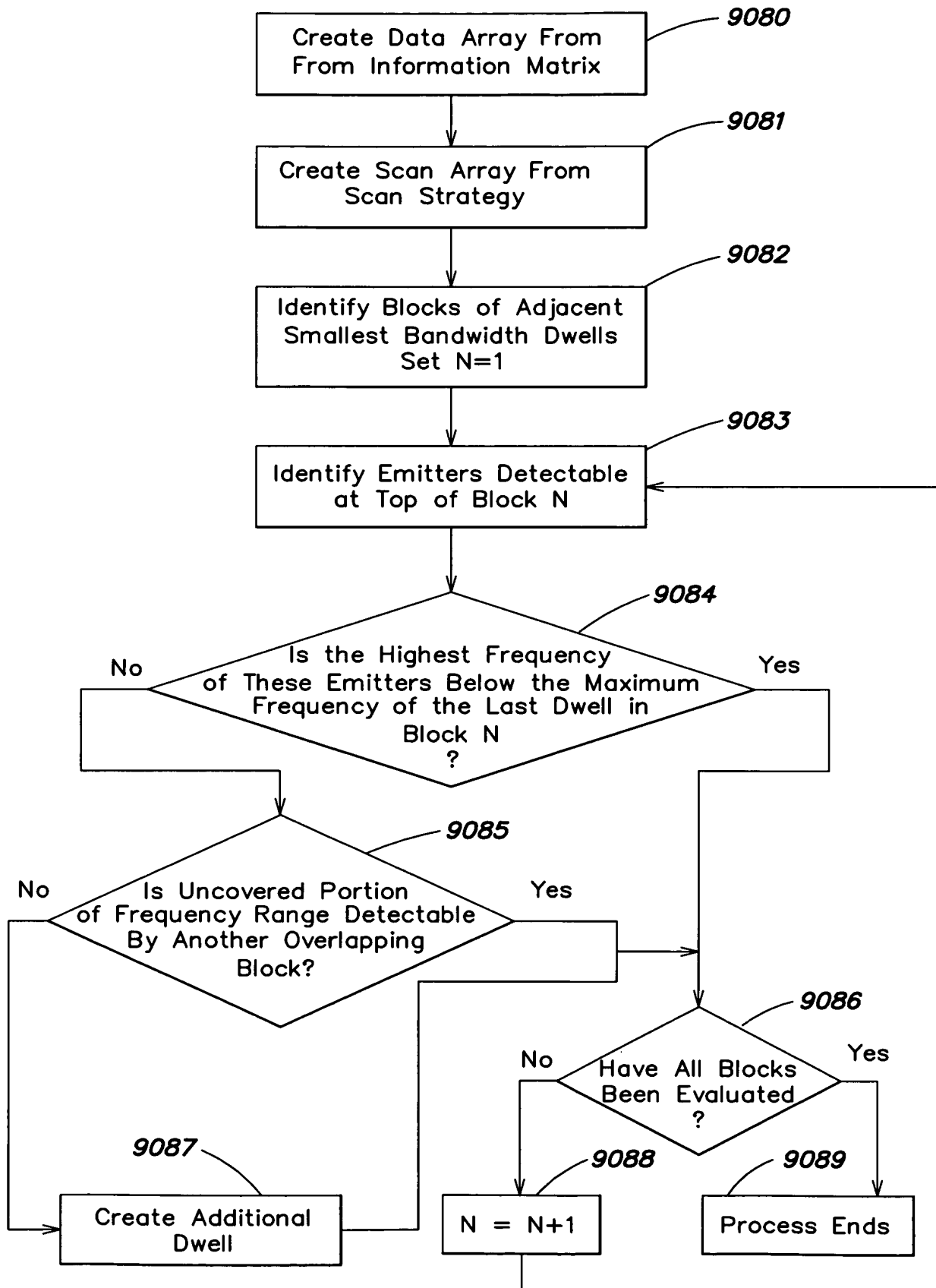
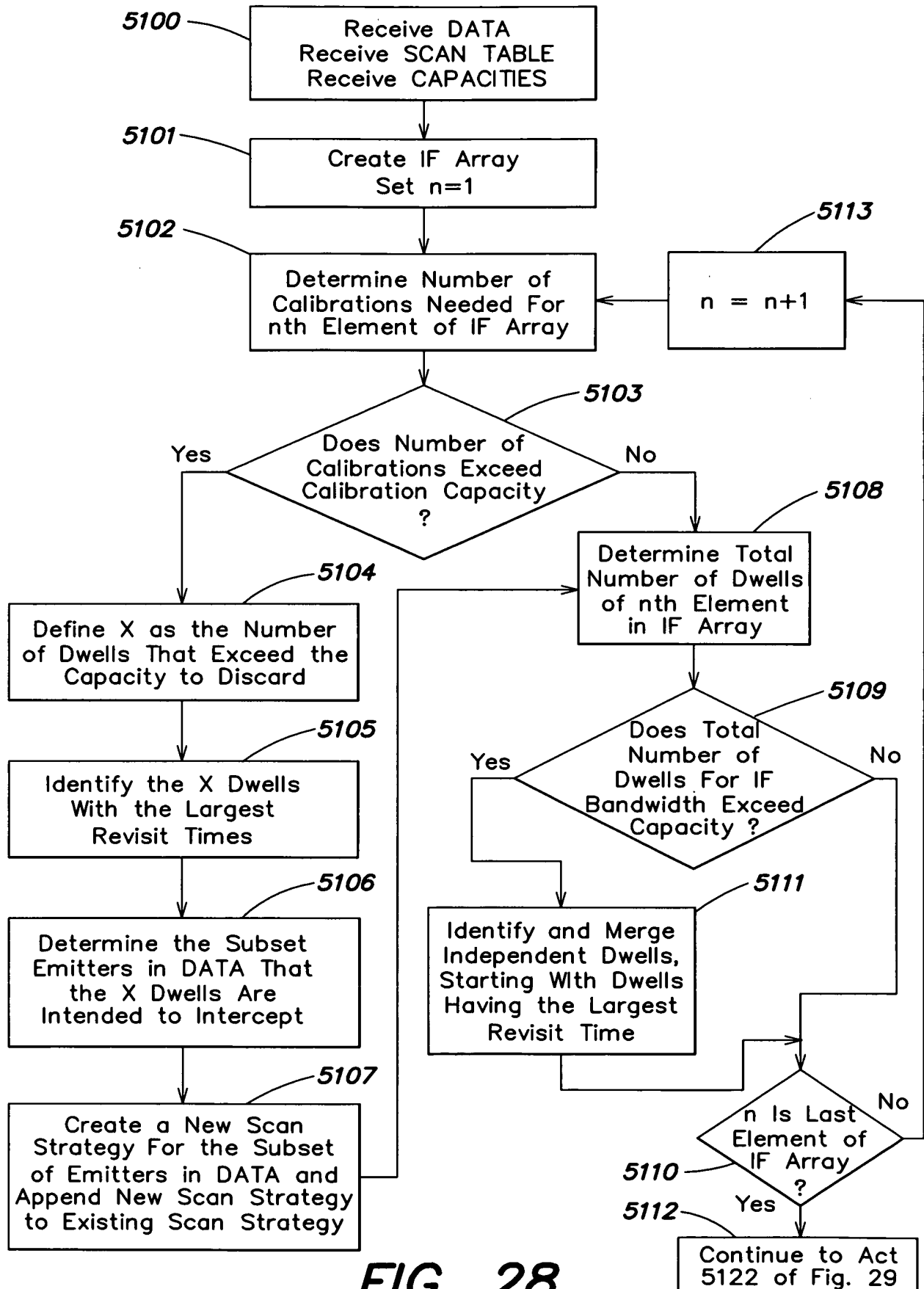


FIG. 27



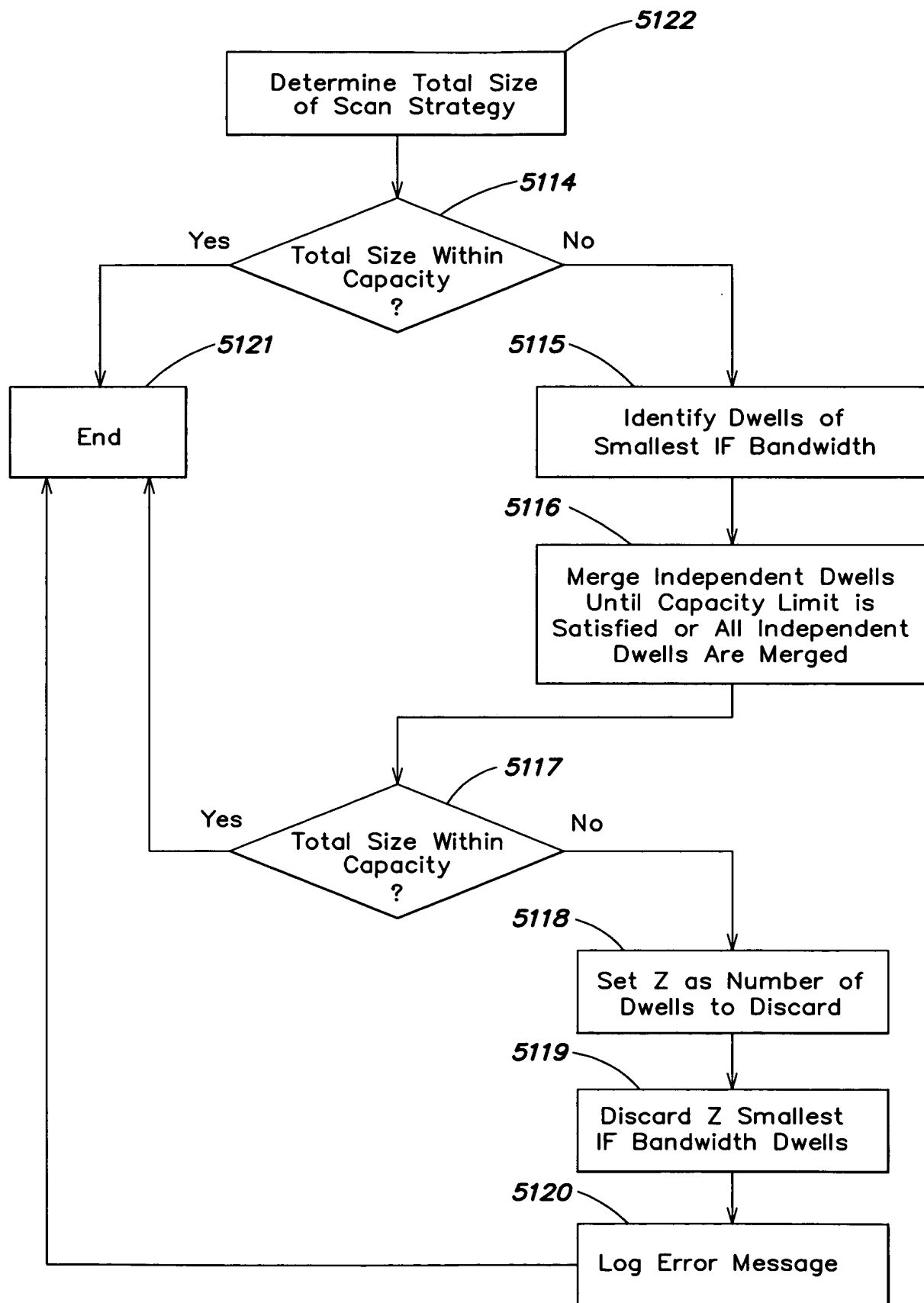


FIG. 29

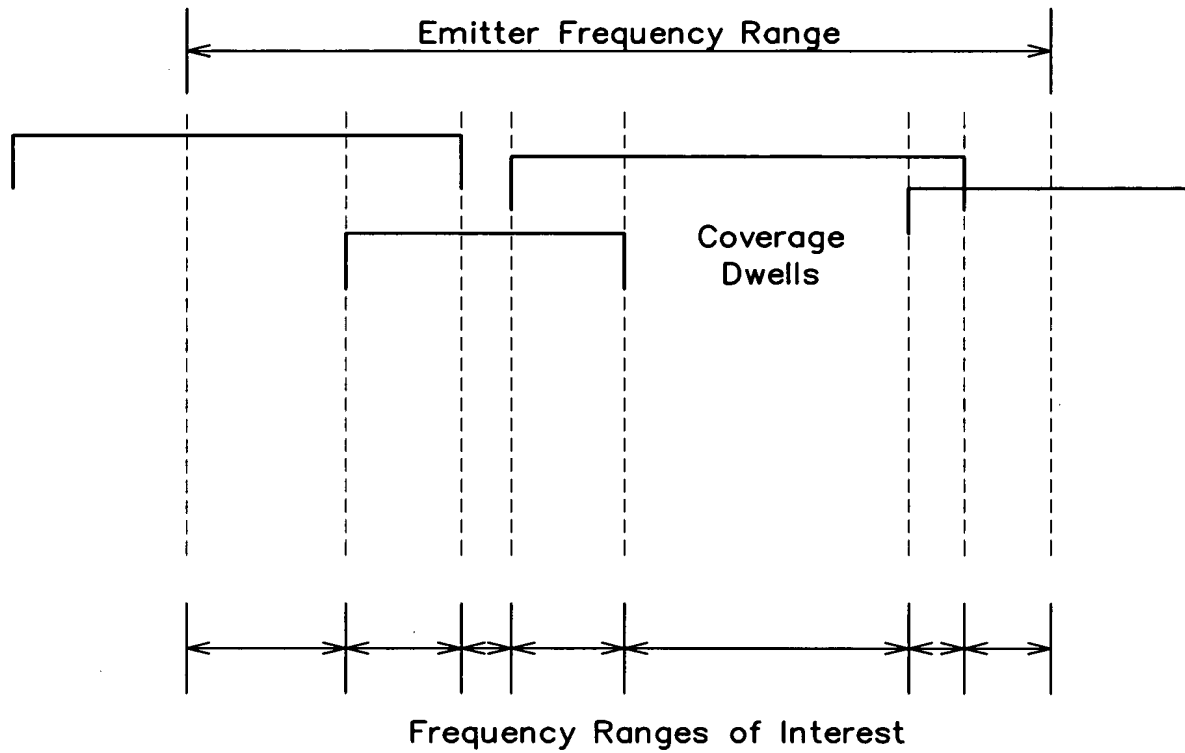


FIG. 30

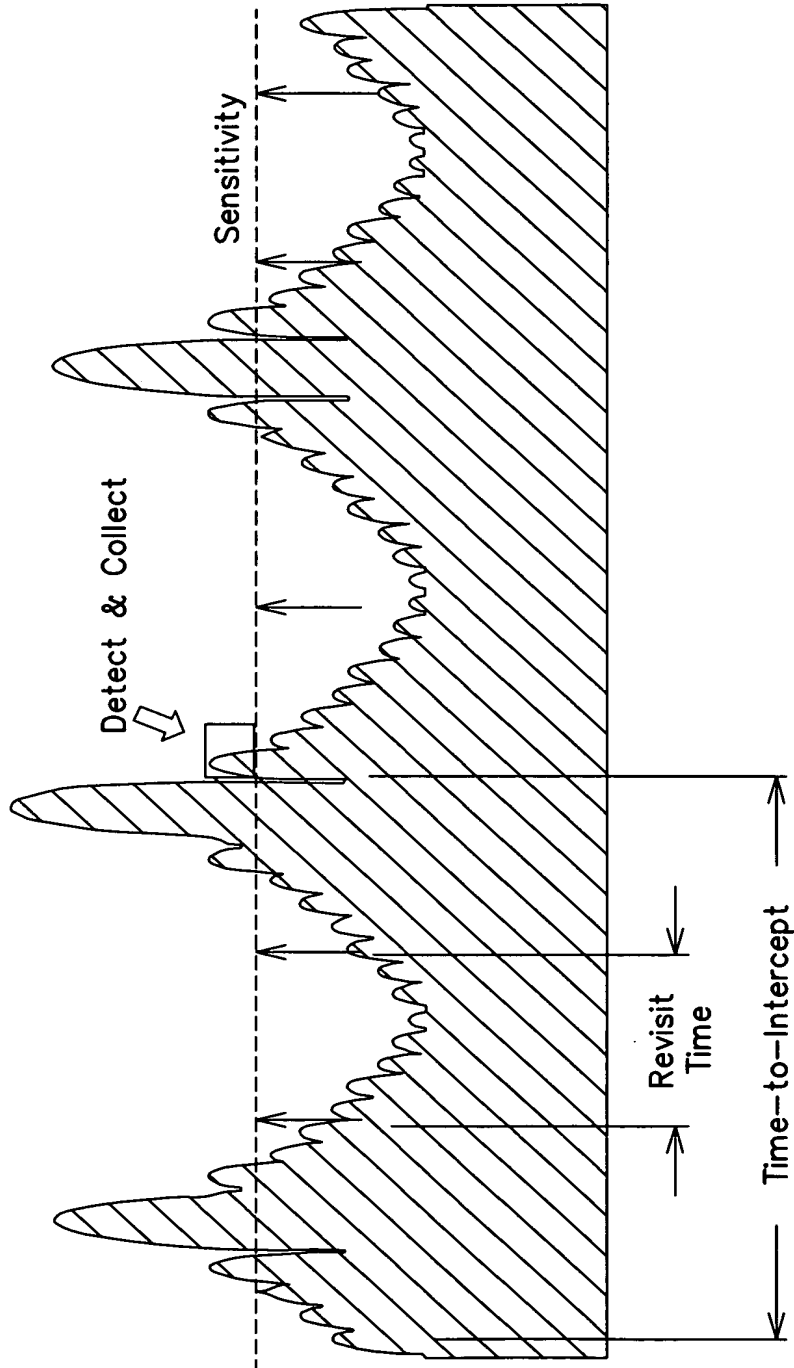


FIG. 31

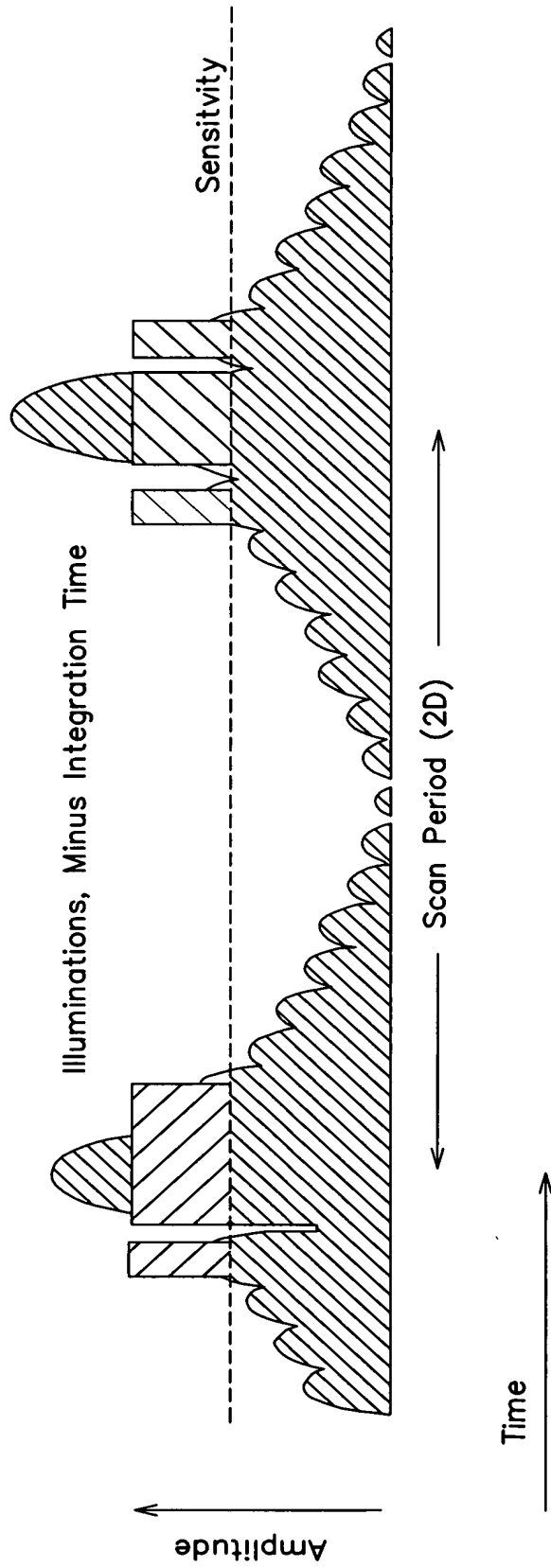


FIG. 32